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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/697,070
Filing Date: October 29, 2003
Appellant(s): HANKIN, KEITH ALAN

Julia A. Thomas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 26, 2007 appealing from the Office action mailed May 21, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,879,995	Chinta et al	5-2000
2003/0177187	Levine et al	2-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. **The following is a quotation of the second paragraph of 35 U.S.C. 112**:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention**.

3. In particular, the phrases " the first" and " the second amount of free space" is unclear, because claim language does not disclose any partitions on which those separate free spaces could reside, furthermore it is also indefinite if the space represents physical space (i.e. sectors on the disc drive) or virtual space (i.e. tables).

4. For the purposes of the examination, the examiner assumes, that the first and second amounts of the free space refer to the same free space allocated in the database.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance "first and second amounts of the free space" were not disclosed in the body of the original specification, in contrast the free space was not segmented into two separate spaces.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. **Claims 1-3, 5-11, 13-16, 18-24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Chinta et al (US Patent 6879995)**.

As to claims 1 and 14, Chinta discloses a method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, comprising: storing by a first database server (Figure 2C, 108A) a first set

of space usage data (column 39, lines 53-56 and figure 23, wherein check for out of storage can be performed by each application server) that identifies a first amount of free space associated with the database (Figure 2C, 110), wherein the first set of space usage data is updated (Figure 23, step 502, check for out of storage and periodic update), by the first server, based on changes made to the database by the first database server (for instance logging message and minimizing existing free space); retrieving, from one or more second database servers (Figure 2C, 108B), a second set of space usage data (column 14, lines 3-9) that identifies a second amount of free space associated with the database (Figure 2C, 110), wherein the second set of space usage data is updated (Figure 23, step 502, check for out of storage and periodic update (Figure 23, step 502, check for out of storage and periodic update, wherein this step can be performed by any application server), by the one or more second database servers, based on changes made to the database by the one or more second database servers (logging messages and reducing space in the database by the second application server); updating the first set of space usage data with the second set of space usage data (column 14, lines 40-55, wherein the request for log could be redirected to other application server, in this instance logging information in the application server to which request was transferred might be updated with out of space data for the new logging message/request, which might have a different size than the previously existing one and therefore previous out of space data on the applicant data might not be sufficient); and evaluating the usage of space in the database based on the updated

first set of space usage data (column 39, lines 42-56, in order to determine if logging operation can be performed or resumed, the evaluation of database must be performed).

As to claims 2 and 15, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the first set of space usage data and the second space usage data each reflect the amount of free space in one or more tablespaces that are each associated with the database (column 37, lines 50-51 and column 39, lines 53-56).

As to claims 3 and 16, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the first set of space usage data and the second space usage data each reflect the amount of free space in one or more files (wherein database table is associate with a file) that are each associated with the database (column 37, lines 50-51 and column 39, lines 53-56).

As to claims 5 and 18, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the step of storing the first set of space usage data comprises: storing a subset of the first set of space usage data (Figure 23, steps 502 and 504, and wherein server (108A or 108B) has a capacity to store the data), wherein each subset is associated with a transaction initiated by the first database server (prior to update space check there is a log in service associated with the application server,

so that is the indication that the space check in the database should be performed) that is performed on the database.

As to claims 6 and 19, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the step of storing the first set of space usage data comprises: examining the database to generate the first set of space usage data (column 5, lines 13-16).

As to claims 7 and 20, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the step of retrieving the second set of space usage data comprises: determining that a configurable period of time has expired (Figure 23, step 502, wherein the space check occurs periodically, i.e. set time; paragraph 39, lines 53-56), wherein the configurable period of time indicates an amount of time to wait before retrieving second the second set of space usage data from one or more second clients.

As to claims 8 and 21, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the step of evaluating the usage of space in the database comprises: determining if a tablespace in the database has exceeded a configurable threshold (column 40, lines 25-31; wherein the amount if remaining storage space that is associated with low level of storage space is considered to be threshold).

As to claims 9 and 22, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, comprising: raising an alert that indicates that the usage of space in a tablespace in the database has exceeded a configurable threshold (column 40, lines 11- 16).

As to claims 10 and 23, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, comprising: in response to the step pf evaluating of the usage of space in the database, scheduling space reclamation for the database (Figure 23, step 510).

As to claims 11 and 24, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the database is in a distributed cluster if databases (as shown in figure 2A application servers and main database are all connected (cluster), since application servers have storage capability the can also be considered a database (server for storing data)).

As to claims 13 and 26, Chinta discloses the method and a computer- readable medium carrying one or more sequences for determining the usage of space in a database, wherein the steps of retrieving, updating, and evaluating may be repeated in sequence after a configurable amount of time lapses the step of evaluating was last performed (as shown in figure 23, if the system is not our of space (step 504)

the flow chart loops so that the steps of checking and evaluating can be performed again).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinta et al (US Patent 6879995) in the view of Levine et al (US Publication 20030177187)**. Chinta teaches all the limitations disclosed in claims 1 and 14, except for the database being in a grid of databases. Levine heals this deficiency by teaching computing grid for massively multi-user immersive persistent-state and session based applications (Figure 7). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use a database in a grid of databases in the Chinta's monitoring system because as taught by Levine computing grid speeds up the access time and improves functionality of the network.

(10) Response to Argument

I(Issue): did the Examiner err in concluding that claims 1 and 14 were rejected under 35 U.S.C 112 second paragraph as being indefinite.

The Appellant's argument pertaining to rejection of claims 1 and 14 under 35 U.S.C 112 second paragraph have been found persuasive. Consequently, the rejection has been withdrawn.

I (Issue): did the Examiner err in concluding that claims 1 and 14 were rejected under 35 U.S.C. 102(e) as being anticipated by Chinta et al (US Patent No. 6,879,995).

- *In the first argument the Appellant asserts "The Office Action asserted that such passage is relied on for showing anticipation of the features of Claim 1 above because, as admitted in the Office Action, "such step can be performed by any application server". However, two servers performing a same step on a same storage space is not what is being claimed by the features above in Claim 1. Claim 1 explicitly recites, inter alia, a first set of usage space data and a second set of usage space data. Claim 1 explicitly recites, inter alia, wherein the first set of space usage data is updated, by the database server, based on changes made to the database by the first database server and wherein the second set*

of space usage data is updated, by the one or more database servers. To replace the claimed subject matter in such features with Chinta's "storage space" would destroy claim 1." (page 14)

The Examiner disagrees with the Appellant's assertion. It appears as the Appellant believes that the claim limitation disclosed in claims 1 or 14 recite two separate storage spaces to which first and second set of data correspond to. On the contrary, such a limitation is not disclosed in any of the current claims. In particular the claim 1 recites "wherein the first set of space usage data is updated, by the database server, based on changes made to the database by the first database server" and "retrieving, from one or more second database servers, a second set of space usage data identifies a second amount of free space associated with the database". The Examiner would like to note that the Appellant refers to the first and second amounts of free space as it would be required for those two amounts to correspond to two distinct spaces, however from the current claim language it can be interpreted that the first amount is associated with the data received from the first database server and the second amount similarly corresponds to the second database server, while those two amounts can associated with the same space i.e. database. There is no language in the claim about the database being formatted or partitioned. Consequently, it is more than reasonable to assume that two separate spaces are not disclosed in the argued claims.

- *In the second argument, the Appellant alleges "Chinta discloses only one storage space. Chinta does not disclose "updating the first set of space usage data with the second set of space usage data" because Chinta does not disclose a first set of space usage data and a second set of space usage data". (page 15)*

The Examiner disagrees with the Appellant's assertion. As explained above, the language of independent claims 1 and 14 does not require first and second storage spaces being two separate partitions or volumes, instead it could be the storage space that each server attempts to access in order to allow logging operation. Since each of the application servers is equipped with load balancing part, each of the servers can redirect logging operation to other server (column 14, lines 40-55). Every time when of the server attempts to proceed with log in operation, the out of storage condition in checked in order to prevent from possible complications associated with insufficient space (i.e. could be interpreted as first set of space usage). When the next logging request is submitted and directed to another server, the out of storage space condition is checked again, and if space is sufficient, the log is processed and the overall free space available in the database is reduced, therefore the amount of the existing space is updated. The important thing to note that all of the application servers are accessing one database and the servers have to be synchronized as to the available space in the main storage. Consequently, the out of storage information has to be broadcasted (i.e. the previous data about the storage area is updated

periodically (Figure 23, step 510)) to all the servers in order to allow them to process the message logging, since this task could be performed by any of the application servers (column 14, lines 40-55).

- *In the third argument, the Appellant asserts that "Chinta teaches a service broadcasting information to its respective application server. Broadcasting information to its respective application server is not what is being claimed in the feature in Claim 1. As described above, the first database server* ***retrieves*** *from the one or more second database servers a second set of space usage data wherein the space data is updated by the one or more database servers based in changes made to the database by the one or more second database servers" (page 16).*

The Examiner disagrees with the Appellant's assertion. As the Appellant admits, Chinta teaches broadcasting the information to multiple servers, therefore the new information/data is available to all those servers and finally it has to be accepted and stored (i.e. updating previous information). This whole process from the point of when the data is available (broadcasted) to the point where it is stored on a respective server is considered "retrieving". In other words the data is obtained from the source and stored in the target server.

- *In the fourth argument, the Appellant states "Secondly, Chinta's passage teaches load balancing information. Load balancing information is not the claimed "second set of space usage data*

wherein the space usage data is updated by the one or more database servers based on changes made to the database by the one or more second database servers" (page 16).

The Examiner disagrees with the Appellant's assertion. As clearly shown in figure 23, step 510, each server periodically checks for available storage and update the status. So in other words if the server is requested to process a message log, and the space is out of storage, after a certain time the check is done again in order to check for available space and if that is true, then the message logging is resumed, and the previous out of storage space is updated with "there is space".

- *In the fifth argument, the Appellant asserts "It is evidently clear that the citation (column 14, lines 40-55) has nothing to do with the claimed first set of space usage data, the claimed second set of space usage data, and "updating the first set of space usage data with the second set of space usage data" (page 17).*

The Examiner disagrees with the Appellant's assertion. The Examiner maintains that Chinta teaches "updating the first set of space usage data with the second set of space usage data", because the two servers shown in figure 2A, elements 108A and 108B are both capable of processing message log, however before that is accomplished, the storage space has to be verified. Each server has their own out-of storage space condition (Figure 23, step 502), and if the most recent log was performed by the second server, this server holds the most

recent storage status, and if the first server is then utilized to perform next logging request, the storage data of the first server would have to be updated with the same information present in the second server (since this computer was utilized most recently). Consequently, the first space usage data is updated with second usage data.

I (Issue): did the Examiner err in concluding that claims 12 and 25 stand rejected under 35 U.S.C 103(a) as being unpatentable over Chinta et al (US Patent No. 6879995, hereinafter Chinta) in the view of Levine et al (US Publication No. 2003/0177187, hereinafter Levine).

- *In the first argument the Appellant asserts "By virtue of its dependence from Claim 1, claim 12 inherits the featured that are distinguished from Chinta above. Therefore, the rejection of Claim 12 under 35 U.S.C 103(a) should be reversed".*

The Examiner disagrees with the Appellant's assertion. As mentioned above, the Examiner maintains that the independent claims 1 and 14 are anticipated by Chinta's teaching. Hence claims 12 and 25 are also held unpatentable over Chinta in view of Levine.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Angela M Lie

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